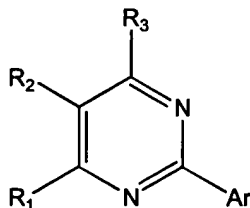


C1 the sample of tissue, washing the tissue sample to remove unbound compound, and detecting remaining bound compound, wherein the detection of remaining bound compound is an indication of the presence of CRF receptors in the tissue sample.

IN THE CLAIMS

3 (twice amended)

A compound of the formula



or a pharmaceutically acceptable salt thereof, wherein:

Sub D1 R₁ and R₃ are independently selected from hydrogen, halogen, cyano, C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, (C₃₋₇cycloalkyl)₁C₁₋₄alkyl, (C₃₋₇cycloalkyl)₁C₂₋₄alkenyl, (C₃₋₇cycloalkyl)₁C₂₋₄alkynyl, -O(C₃₋₇cycloalkyl)₁C₁₋₄alkyl, -O(C₃₋₇cycloalkyl)₁C₂₋₄alkenyl, -O(C₃₋₇cycloalkyl)₁C₂₋₄alkynyl, halo(C₁₋₆)alkyl, haloC₂₋₆alkenyl, haloC₂₋₆alkynyl, -O(halo(C₁₋₆)alkyl), -O(halo(C₂₋₆)alkenyl), -O(halo(C₂₋₆)alkynyl), -O(C₁₋₆alkyl), -O(C₂₋₆alkenyl), -O(C₂₋₆alkynyl), S(O)_n(C₁₋₆alkyl), S(O)_n(C₂₋₆alkenyl), and S(O)_n(C₂₋₆alkynyl),

where each alkyl, or alkenyl is independently straight, branched, or cyclic, and each alkynyl is straight or branched, and is optionally substituted with one or more substituents independently chosen from halogen, hydroxy, oxo, cyano, C₁₋₄alkoxy, amino, and mono- or di(C₁₋₄)alkylamino,

and

where each C₃₋₇cycloalkyl₁ is optionally substituted by one or more substituents independently chosen from halogen, hydroxy, oxo, cyano, C₁₋₄alkoxy, amino, and mono- or di(C₁₋₄)alkylamino,

with the proviso that not both R₁ and R₃ are hydrogen;

R₂ is selected from the group consisting of -XR_A and Y; and

Ar is selected from the group consisting of phenyl, naphthyl, pyridyl, pyrimidinyl, pyridizynyl, and thiophenyl, each of which is mono-, di-, or tri-substituted with R_C;

R_A and R_B, which may be the same or different, are independently selected at each occurrence from:

hydrogen, straight, branched, or cyclic alkyl groups consisting of 1 to 8 carbon atoms, (cycloalkyl)alkyl groups consisting of 4 to 12 carbon atoms, straight, branched, or cyclic alkenyl groups consisting of 2 to 8 carbon atoms, or straight or branched alkynyl groups consisting of 2 to 8 carbon atoms, each of which may be further substituted with one or more substituent(s) independently selected from oxo, hydroxy, halogen, cyano, amino, C₁₋₆alkoxy, -NH(C₁₋₆alkyl), -N(C₁₋₆alkyl)(C₁₋₆alkyl), -NHC(=O)(C₁₋₆alkyl), -N(C₁₋₆alkyl)C(=O)(C₁₋₆alkyl), -NHS(O)_n(C₁₋₆alkyl), -S(O)_n(C₁₋₆alkyl), -S(O)_nNH(C₁₋₆alkyl), -S(O)_nN(C₁₋₆alkyl)(C₁₋₆alkyl), and Z;

R_C is independently selected at each occurrence from halogen, cyano, halo(C₁₋₆alkyl), halo(C₁₋₆alkoxy), hydroxy, amino, C₁₋₆alkyl substituted with 0-2 R_D, C₂₋₆ alkenyl substituted with 0-2 R_D, C₂₋₆alkynyl substituted with 0-2 R_D, C₃₋₇cycloalkyl substituted with 0-2 R_D, (C₃₋₇cycloalkyl)C₁₋₄alkyl substituted with 0-2 R_D, C₁₋₆alkoxy substituted with 0-2 R_D, -NH(C₁₋₆alkyl) substituted with 0-2 R_D, -N(C₁₋₆alkyl)(C₁₋₆alkyl) each C₁₋₆alkyl independently substituted with 0-2 R_D, -XR_A, and Y;

R_D is independently selected at each occurrence from the group consisting of halogen, hydroxy, cyano, amino, C₁₋₄alkyl, -O(C₁₋₄alkyl), -NH(C₁₋₄alkyl), -N(C₁₋₄alkyl)(C₁₋₄alkyl), -S(O)_n(alkyl), halo(C₁₋₄alkyl), halo(C₁₋₄alkoxy), CO(C₁₋₄alkyl), CONH(C₁₋₄alkyl), CON(C₁₋₄alkyl)(C₁₋₄alkyl), -XR_A, and Y;

X is independently selected at each occurrence from the group consisting of -CH₂-, -CHR_B-, -O-, -C(=O)-, -C(=O)O-, -S(O)_n-, -NH-, -NR_B-, -C(=O)NH-, -C(=O)NR_B-, -S(O)_nNH-, -S(O)_nNR_B-, -OC(=S)S-, -NHC(=O)-, -NR_BC(=O)-, -NHS(O)_n-, -OSiH_n(C₁₋₄alkyl)_{2-n}-, and -NR_BS(O)_n-;

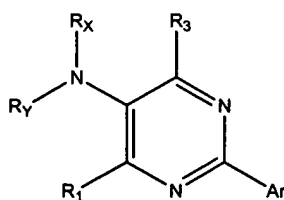
Y and Z are independently selected at each occurrence from: 3- to 7-membered carbocyclic or heterocyclic groups which are saturated, unsaturated, or aromatic, which may be further substituted with one or more substituents independently selected from halogen, oxo, hydroxy,

amino, cyano, C₁₋₄alkyl, -O(C₁₋₄alkyl), -NH(C₁₋₄alkyl), -N(C₁₋₄alkyl)(C₁₋₄alkyl), and -S(O)_n(alkyl),

said 3- to 7-membered heterocyclic groups containing one or more heteroatom(s) independently selected from N, O, and S, with the point of attachment being either carbon or nitrogen; and

n is independently selected at each occurrence from 0, 1, and 2.

9. (twice amended) A compound of Formula A



Formula A

or a pharmaceutically acceptable salt thereof, wherein:

R_X and R_Y are the same or different and are independently selected from:

- hydrogen,
- (C=O)alkyl_A, wherein alkyl_A is a straight or branched alkyl group having from 1 to 8 carbon atoms;
- straight, branched, or cyclic alkyl groups consisting of 1 to 8 carbon atoms, cycloalkyl(alkyl) groups consisting of 4 to 12 carbon atoms, straight, branched, or cyclic alkenyl groups consisting of 2 to 8 carbon atoms, or straight or branched alkynyl groups consisting of 2 to 8 carbon atoms, each of which may be further substituted with one or more substituent(s) independently selected from:
 - hydroxy, halogen, amino, cyano, -O(C₁₋₄alkyl), -NH(C₁₋₄alkyl), and -NH(C₁₋₄alkyl)(C₁₋₄alkyl), and
 - 3- to 7-membered carbocyclic and heterocyclic groups, which are saturated, unsaturated, or aromatic, which may be substituted with one or more substituents independently selected from halogen, halo(C₁₋₄)alkyl, halo(C₁₋₄)alkoxy, oxo, hydroxy, amino, C₁₋₄alkyl, -

$\text{O}(\text{C}_{1-4}\text{alkyl})$, $-\text{NH}(\text{C}_{1-4}\text{alkyl})$, $-\text{N}(\text{C}_{1-4}\text{alkyl})(\text{C}_{1-4}\text{alkyl})$, and $-\text{S}(\text{O})_n(\text{alkyl})$, wherein said 3- to 7-membered heterocyclic groups contain one or more heteroatom(s) independently selected from N, O, and S, with the point of attachment being either carbon or nitrogen,

R_1 and R_3 are independently selected from hydrogen, halogen, cyano, C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, $(\text{C}_{3-7}\text{cycloalkyl}_1)\text{C}_{1-4}\text{alkyl}$, $(\text{C}_{3-7}\text{cycloalkyl}_1)\text{C}_{2-4}\text{alkenyl}$, $(\text{C}_{3-7}\text{cycloalkyl}_1)\text{C}_{2-4}\text{alkynyl}$, $-\text{O}(\text{C}_{3-7}\text{cycloalkyl}_1)\text{C}_{1-4}\text{alkyl}$, $-\text{O}(\text{C}_{3-7}\text{cycloalkyl}_1)\text{C}_{2-4}\text{alkenyl}$, $-\text{O}(\text{C}_{3-7}\text{cycloalkyl}_1)\text{C}_{2-4}\text{alkynyl}$, halo(C_{1-6})alkyl, halo C_{2-6} alkenyl, halo C_{2-6} alkynyl, $-\text{O}(\text{halo}(\text{C}_{1-6})\text{alkyl})$, $-\text{O}(\text{halo}(\text{C}_{2-6})\text{alkenyl})$, $-\text{O}(\text{halo}(\text{C}_{2-6})\text{alkynyl})$, $-\text{O}(\text{C}_{1-6}\text{alkyl})$, $-\text{O}(\text{C}_{2-6}\text{alkenyl})$, $-\text{O}(\text{C}_{2-6}\text{alkynyl})$, $\text{S}(\text{O})_n(\text{C}_{1-6}\text{alkyl})$, $\text{S}(\text{O})_n(\text{C}_{2-6}\text{alkenyl})$, and $\text{S}(\text{O})_n(\text{C}_{2-6}\text{alkynyl})$,

where each alkyl, or alkenyl is independently straight, branched, or cyclic, and each alkynyl is straight or branched, and is optionally substituted by one or more substituents independently chosen from halogen, hydroxy, oxo, cyano, C_{1-4} alkoxy, amino, and mono- or di(C_{1-4})alkylamino,

and

where said $\text{C}_{3-7}\text{cycloalkyl}_1$ is optionally substituted by one or more substituents independently chosen from halogen, hydroxy, oxo, cyano, C_{1-4} alkoxy, amino, and mono- or di(C_{1-4})alkylamino

with the proviso that not both R_1 and R_3 are hydrogen;

Ar is selected from the group consisting of phenyl, naphthyl, pyridyl, pyrimidinyl, and thiophenyl, each of which is mono-, di-, or tri-substituted with R_C ;

R_A and R_B , which may be the same or different, are independently selected at each occurrence from the group consisting of:

hydrogen, straight, branched, or cyclic alkyl groups consisting of 1 to 8 carbon atoms, (cycloalkyl)alkyl groups consisting of 4 to 12 carbon atoms, straight, branched, or cyclic alkenyl groups consisting of 2 to 8 carbon atoms, and straight or branched alkynyl groups consisting of 2 to 8 carbon atoms, each of which may be further substituted with one or more substituent(s) independently selected from oxo, hydroxy, halogen, nitro, cyano, C_{1-}

alkoxy, -NH(C₁₋₆alkyl), -N(C₁₋₆alkyl)(C₁₋₆alkyl), -NHC(=O)(C₁₋₆alkyl), -N(C₁₋₆alkyl)C(=O)(C₁₋₆alkyl), -NHS(O)_n(C₁₋₆alkyl), -S(O)_n(C₁₋₆alkyl), -S(O)_nNH(C₁₋₆alkyl), -S(O)_nN(C₁₋₆alkyl)(C₁₋₆alkyl), and Z;

R_C is independently selected at each occurrence from halogen, cyano, halo(C₁₋₆)alkyl, halo(C₁₋₆)alkoxy, hydroxy, amino, and C₁₋₆alkyl substituted with 0-2 R_D, C₂₋₆ alkenyl substituted with 0-2 R_D, C₂₋₆alkynyl substituted with 0-2 R_D, C₃₋₇cycloalkyl substituted with 0-2 R_D, (C₃₋₇cycloalkyl)C₁₋₄alkyl substituted with 0-2 R_D, C₁₋₆alkoxy substituted with 0-2 R_D, -NH(C₁₋₆alkyl) substituted with 0-2 R_D, -N(C₁₋₆alkyl)(C₁₋₆alkyl) each C₁₋₄alkyl independently substituted with 0-2 R_D, -X_RA, and Y, with the proviso that at least one of the positions ortho or para to the point of attachment of Ar to the pyrimidine ring shown in Formula A is substituted;

R_D is independently selected at each occurrence the group consisting of halogen, hydroxy, cyano, C₁₋₄alkyl, -O(C₁₋₄alkyl), -NH(C₁₋₄alkyl), -N(C₁₋₄alkyl)(C₁₋₄alkyl), -S(O)_n(alkyl) halo(C₁₋₄)alkyl, halo(C₁₋₄)alkoxy, CO(C₁₋₄alkyl), CONH(C₁₋₄alkyl), CON(C₁₋₄alkyl)(C₁₋₄alkyl), -X_RA, and Y;

X is independently selected at each occurrence from the group consisting of -CH₂-, -CHR_B-, -O-, -C(=O)-, -C(=O)O-, -S(O)_n-, -NH-, -NR_B-, -C(=O)NH-, -C(=O)NR_B-, -S(O)_nNH-, -S(O)_nNR_B-, -OC(=S)S-, -NHC(=O)-, -NR_BC(=O)-, -NHS(O)_n-, -OSiH_n(C₁₋₄-alkyl_{2-n})-, and -NR_BS(O)_n-;

Y and Z are independently selected at each occurrence from the group consisting of: 3- to 7-membered carbocyclic and heterocyclic groups, which are saturated, unsaturated, or aromatic, which may be further substituted with one or more substituents independently selected from halogen, oxo, hydroxy, amino, C₁₋₄alkyl, -O(C₁₋₄alkyl), -NH(C₁₋₄alkyl), -N(C₁₋₄alkyl)(C₁₋₄alkyl), and -S(O)_n(alkyl); and

n is 0, 1, or 2.

10. (twice amended) A compound or salt according to Claim 9, wherein:

R_X and R_Y are the same or different and are independently selected from:

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a) $-(C=O)alkyl_A$, wherein $alkyl_A$ is a straight or branched alkyl group having from 1 to 8 carbon atoms;

b) straight, branched, or cyclic alkyl groups consisting of 1 to 8 carbon atoms, (cycloalkyl)alkyl groups consisting of 4 to 12 carbon atoms, straight, branched, or cyclic alkenyl groups consisting of 2 to 8 carbon atoms, or straight or branched alkynyl groups consisting of 2 to 8 carbon atoms, each of which may be further substituted with one or more substituent(s) independently selected from:

i) hydroxy, halogen, amino, cyano, $-O(C_{1-4}alkyl)$, $-NH(C_{1-4}alkyl)$, and $-NH(C_{1-4}alkyl)(C_{1-4}alkyl)$, and

ii) 3- to 7-membered carbocyclic and heterocyclic groups, which are saturated, unsaturated, or aromatic, which may be substituted with one or more substituents independently selected from halogen, halo(C_{1-4})alkyl, halo(C_{1-4})alkoxy, oxo, hydroxy, amino, $C_{1-4}alkyl$, $-O(C_{1-4}alkyl)$, $-NH(C_{1-4}alkyl)$, $-N(C_{1-4}alkyl)(C_{1-4}alkyl)$, and $-S(O)_n(alkyl)$, wherein said 3- to 7-membered heterocyclic groups contain one or more heteroatom(s) independently selected from N, O, and S, with the point of attachment being either carbon or nitrogen,

R_1 and R_3 are independently selected from hydrogen, halogen, cyano, $C_{1-6}alkyl$, $C_{2-6}alkenyl$, $C_{2-6}alkynyl$, $(C_{3-7}cycloalkyl_1)C_{1-4}alkyl$, $(C_{3-7}cycloalkyl_1)C_{2-4}alkenyl$, $(C_{3-7}cycloalkyl_1)C_{2-4}alkynyl$, $-O(C_{3-7}cycloalkyl_1)C_{1-4}alkyl$, $-O(C_{3-7}cycloalkyl_1)C_{2-4}alkenyl$, $-O(C_{3-7}cycloalkyl_1)C_{2-4}alkynyl$, halo(C_{1-6})alkyl, halo(C_{2-6})alkenyl, halo(C_{2-6})alkynyl, $-O(halo(C_{1-6})alkyl)$, $-O(halo(C_{2-6})alkenyl)$, $-O(halo(C_{2-6})alkynyl)$, $-O(C_{1-6}alkyl)$, $-O(C_{2-6}alkenyl)$, and $-O(C_{2-6}alkynyl)$,

where each alkyl, or alkenyl is independently straight, branched, or cyclic, and each alkynyl is straight or branched, and is optionally substituted by one or more substituents independently chosen from halogen, hydroxy, oxo, cyano, $C_{1-4}alkoxy$, amino, and mono- or di(C_{1-4})alkylamino,

and

where said C₃₋₇cycloalkyl₁ is optionally substituted by one or more substituents independently chosen from halogen, hydroxy, oxo, cyano, C₁₋₄alkoxy, amino, and mono- or di(C₁₋₄)alkylamino

Ar is phenyl, which is mono-, di-, or tri-substituted with R_C;

R_A and R_B, which may be the same or different, are independently selected at each occurrence from the group consisting of:

hydrogen, straight, branched, or cyclic alkyl groups consisting of 1 to 8 carbon atoms, (cycloalkyl)alkyl groups consisting of 4 to 12 carbon atoms, straight, branched, or cyclic alkenyl groups consisting of 2 to 8 carbon atoms, and straight or branched alkynyl groups consisting of 2 to 8 carbon atoms, each of which may be further substituted with one or more substituent(s) independently selected from oxo, hydroxy, halogen, nitro, cyano, C₁₋₆alkoxy, -NH(C₁₋₆alkyl), -N(C₁₋₆alkyl)(C₁₋₆alkyl), -NHC(=O)(C₁₋₆alkyl), -N(C₁₋₆alkyl)C(=O)(C₁₋₆alkyl), and Z;

R_C is independently selected at each occurrence from halogen, cyano, halo(C₁₋₆)alkyl, halo(C₁₋₆)alkoxy, hydroxy, amino, and C₁₋₆alkyl substituted with 0-2 R_D, C₂₋₆ alkenyl substituted with 0-2 R_D, C₂₋₆alkynyl substituted with 0-2 R_D, C₃₋₇cycloalkyl substituted with 0-2 R_D, (C₃₋₇cycloalkyl)C₁₋₄alkyl substituted with 0-2 R_D, C₁₋₆alkoxy substituted with 0-2 R_D, -NH(C₁₋₆alkyl) substituted with 0-2 R_D, -N(C₁₋₆alkyl)(C₁₋₆alkyl) each C₁₋₄alkyl independently substituted with 0-2 R_D, -XR_A, and Y, with the proviso that at least one of the positions ortho or para to the point of attachment of Ar to the pyrimidine ring shown in Formula A is substituted;

R_D is independently selected at each occurrence the group consisting of halogen, hydroxy, cyano, C₁₋₄alkyl, -O(C₁₋₄alkyl), -NH(C₁₋₄alkyl), -N(C₁₋₄alkyl)(C₁₋₄alkyl), halo(C₁₋₄)alkyl, halo(C₁₋₄)alkoxy, CO(C₁₋₄alkyl), CONH(C₁₋₄alkyl), CON(C₁₋₄alkyl)(C₁₋₄alkyl), -XR_A, and Y;

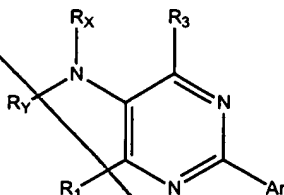
X is independently selected at each occurrence from the group consisting of -CH₂-, -CHR_B-, -O-, -C(=O)-, -C(=O)O-, -NH-, -NR_B-, -C(=O)NH-, -C(=O)NR_B-, -NHC(=O)-, and -NR_BC(=O)-;

Y and Z are independently selected at each occurrence from the group consisting of: 3- to 7-membered carbocyclic and heterocyclic groups, which are saturated, unsaturated, or

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aromatic, which may be further substituted with one or more substituents independently selected from halogen, oxo, hydroxy, amino, C₁₋₄alkyl, -O(C₁₋₄alkyl), -NH(C₁₋₄alkyl), and -N(C₁₋₄alkyl)(C₁₋₄alkyl); and
n is 0, 1, or 2.

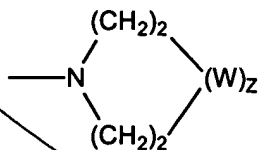
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13. (twice amended) A compound or salt according to claim 9, wherein:
Ar is phenyl mono-, di-, or tri-substituted with R_C,
R_X and R_Y, which may be the same or different, are independently selected at each occurrence from
straight, branched, or cyclic alkyl groups consisting of 1 to 8 carbon atoms, (cycloalkyl)alkyl groups consisting of 4 to 12 carbon atoms, straight, branched, or cyclic alkenyl groups consisting of 2 to 8 carbon atoms, or straight or branched alkynyl groups consisting of 2 to 8 carbon atoms; and
R₁ and R₃ are independently selected from the group consisting of hydrogen, halogen, C₁₋₄alkoxy, halo(C₁₋₄)alkyl, (halo(C₁₋₄)alkoxy, C₁₋₆alkyl, which C₁₋₆alkyl is unsubstituted or substituted by one to three substituents independently selected from hydroxy, oxo, cyano, C₁₋₄alkoxy, amino, and mono- or di(C₁₋₄)alkylamino, (C₃₋₇cycloalkyl)C₁₋₄alkyl, which (C₃₋₇cycloalkyl)C₁₋₄alkyl is unsubstituted or substituted by one to three substituents independently selected from hydroxy, oxo, cyano, C₁₋₄alkoxy, amino, and mono- or di(C₁₋₄)alkylamino.

14. (amended) A compound or salt according to claim 9 of the formula:



R_X and R_Y are the same or different and are independently selected from the group consisting of:
hydrogen and C₁ - C₆ alkyl; or

NR_xR_y represents:

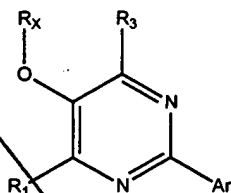


wherein:

z is 0 or 1; and

W is chosen from the group consisting of CR_AR_B, NR_B, and O.

15. (twice amended) A compound or salt according to the formula



wherein:

R_x is chosen from

straight, branched, or cyclic alkyl groups consisting of 1 to 8 carbon atoms, (cycloalkyl)alkyl groups consisting of 4 to 12 carbon atoms, straight, branched, or cyclic alkenyl groups consisting of 2 to 8 carbon atoms, or straight or branched alkynyl groups consisting of 2 to 8 carbon atoms, each of which may be further substituted with one or more substituent(s) independently selected from:

(a) hydroxy, halogen, amino, cyano, -O(C₁₋₄alkyl), -NH(C₁₋₄alkyl), and -NH(C₁₋₄alkyl)(C₁₋₄alkyl), and

(b) 3- to 7-membered carbocyclic and heterocyclic groups, which are saturated, unsaturated, or aromatic, which may be substituted with one or more substituents selected from halogen, halo(C₁₋₄)alkyl, oxo, hydroxy, amino, C₁₋₄alkyl, -O(C₁₋₄alkyl), -NH(C₁₋₄alkyl), -N(C₁₋₄alkyl)(C₁₋₄alkyl), wherein said 3- to 7-membered heterocyclic

groups contain one or more heteroatom(s) selected from N, O, and S, with the point of attachment being either carbon or nitrogen;

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R₁ and R₃ are independently selected from hydrogen, halogen, cyano, C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, (C₃₋₇cycloalkyl₁)C₁₋₄alkyl, (C₃₋₇cycloalkyl₁)C₂₋₄alkenyl, (C₃₋₇cycloalkyl₁)C₂₋₄alkynyl, -O(C₃₋₇cycloalkyl₁)C₁₋₄alkyl, -O(C₃₋₇cycloalkyl₁)C₂₋₄alkenyl, -O(C₃₋₇cycloalkyl₁)C₂₋₄alkynyl, halo(C₁₋₆)alkyl, haloC₂₋₆alkenyl, haloC₂₋₆alkynyl, -O(halo(C₁₋₆)alkyl), -O(halo(C₂₋₆)alkenyl), -O(halo(C₂₋₆)alkynyl), -O(C₁₋₆alkyl), -O(C₂₋₆alkenyl), -O(C₂₋₆alkynyl), S(O)_n(C₁₋₆alkyl), S(O)_n(C₂₋₆alkenyl), and S(O)_n(C₂₋₆alkynyl),

where each alkyl, or alkenyl is independently straight, branched, or cyclic, and each alkynyl is straight or branched, and is optionally substituted by one or more substituents independently chosen from halogen, hydroxy, oxo, cyano, C₁₋₄alkoxy, amino, and mono- or di(C₁₋₄)alkylamino,

and

where said C₃₋₇cycloalkyl₁ is optionally substituted by one or more substituents independently chosen from halogen, hydroxy, oxo, cyano, C₁₋₄alkoxy, amino, and mono- or di(C₁₋₄)alkylamino

with the proviso that not both R₁ and R₃ are hydrogen;

Ar is selected from the group consisting of phenyl, naphthyl, pyridyl, pyrimidinyl, and thiophenyl, each of which is mono-, di-, or tri-substituted with R_C;

R_A and R_B, which may be the same or different, are independently selected at each occurrence from the group consisting of:

hydrogen, straight, branched, or cyclic alkyl groups consisting of 1 to 8 carbon atoms, (cycloalkyl)alkyl groups consisting of 4 to 12 carbon atoms, straight, branched, or cyclic alkenyl groups consisting of 2 to 8 carbon atoms, and straight or branched alkynyl groups consisting of 2 to 8 carbon atoms, each of which may be further substituted with one or more substituent(s) independently selected from oxo, hydroxy, halogen, nitro, cyano, C₁₋₆alkoxy, -NH(C₁₋₆alkyl), -N(C₁₋₆alkyl)(C₁₋₆alkyl), -NHC(=O)(C₁₋₆alkyl), -N(C₁₋₆alkyl)C(=O)(C₁₋₆alkyl), -NHS(O)_n(C₁₋₆alkyl), -S(O)_n(C₁₋₆alkyl), -S(O)_nNH(C₁₋₆alkyl), -S(O)_nN(C₁₋₆alkyl)(C₁₋₆alkyl), and Z;

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D4

R_C is independently selected at each occurrence from halogen, cyano, halo(C_{1-6})alkyl, halo(C_{1-6})alkoxy, hydroxy, amino, and C_{1-6} alkyl substituted with 0-2 R_D , C_{2-6} alkenyl substituted with 0-2 R_D , C_{2-6} alkynyl substituted with 0-2 R_D , C_{3-7} cycloalkyl substituted with 0-2 R_D , (C_{3-7} cycloalkyl) C_{1-4} alkyl substituted with 0-2 R_D , C_{1-6} alkoxy substituted with 0-2 R_D , -NH(C_{1-6} alkyl) substituted with 0-2 R_D , -N(C_{1-6} alkyl)(C_{1-6} alkyl) each C_{1-4} alkyl independently substituted with 0-2 R_D , - XR_A , and Y, with the proviso that at least one of the positions ortho or para to the point of attachment of Ar to the pyrimidine ring shown in Formula A is substituted;

R_D is independently selected at each occurrence the group consisting of halogen, hydroxy, cyano, C_{1-4} alkyl, -O(C_{1-4} alkyl), -NH(C_{1-4} alkyl), -N(C_{1-4} alkyl)(C_{1-4} alkyl), -S(O) $_n$ (alkyl) halo(C_{1-4})alkyl, halo(C_{1-4})alkoxy, CO(C_{1-4} alkyl), CONH(C_{1-4} alkyl), CON(C_{1-4} alkyl)(C_{1-4} alkyl), - XR_A , and Y;

X is independently selected at each occurrence from the group consisting of -CH₂-, -CHR_B-, -O-, -C(=O)-, -C(=O)O-, -S(O) $_n$ -, -NH-, -NR_B-, -C(=O)NH-, -C(=O)NR_B-, -S(O) $_n$ NH-, -S(O) $_n$ NR_B-, -OC(=S)S-, -NHC(=O)-, -NR_BC(=O)-, -NHS(O) $_n$ -, -OSiH $_n$ (C_{1-4} alkyl) $_{2-n}$ -, and -NR_BS(O) $_n$ -;

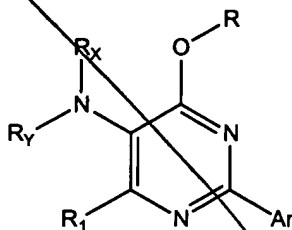
Y and Z are independently selected at each occurrence from the group consisting of: 3- to 7-membered carbocyclic and heterocyclic groups, which are saturated, unsaturated, or aromatic, which may be further substituted with one or more substituents independently selected from halogen, oxo, hydroxy, amino, C_{1-4} alkyl, -O(C_{1-4} alkyl), -NH(C_{1-4} alkyl), -N(C_{1-4} alkyl)(C_{1-4} alkyl), and -S(O) $_n$ (alkyl); and

n is 0, 1, or 2.

C8
Sub
D5

17. (twice amended)

A compound or salt according to Claim 3 of Formula B:



FORMULA B

Ar is phenyl mono-, di-, or tri-substituted with R_C;

R is selected from straight, branched, or cyclic alkyl groups, (cycloalkyl)alkyl groups, straight, branched, or cyclic alkenyl groups, or straight or branched alkynyl groups, and which are optionally substituted by one or more substituents independently chosen from oxo, hydroxy, halogen, cyano, -O(C₁₋₄ alkyl), amino, -NH(C₁₋₄ alkyl), and -N(C₁₋₄ alkyl)(C₁₋₄ alkyl);

R₁ is selected from hydrogen, halogen, cyano, C₁₋₄ alkyl, (C₃₋₇cycloalkyl)C₁₋₄alkyl, halo(C₁₋₄)alkyl, halo(C₁₋₄)alkoxy, and -O(C₁₋₄alkyl); and

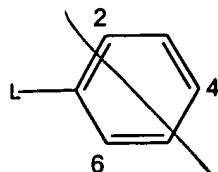
R_X and R_Y are the same or different and are independently selected from:

- a) hydrogen,
- b) -(C=O)alkyl_A, wherein alkyl_A is a straight or branched alkyl group having from 1 to 8 carbon atoms;
- c) straight, branched, or cyclic alkyl groups consisting of 1 to 8 carbon atoms, (cycloalkyl)alkyl groups consisting of 4 to 12 carbon atoms, straight, branched, or cyclic alkenyl groups consisting of 2 to 8 carbon atoms, or straight or branched alkynyl groups consisting of 2 to 8 carbon atoms, each of which may be further substituted with one or more substituent(s) independently selected from (i)hydroxy, halogen, amino, cyano, -O(C₁₋₄alkyl), -NH(C₁₋₄alkyl), and -NH(C₁₋₄alkyl)(C₁₋₄alkyl), and (ii)3- to 7-membered carbocyclic and heterocyclic groups, which are saturated, unsaturated, or aromatic, which may be substituted with one or more substituents selected from halogen, halo(C₁₋₄)alkyl, halo(C₁₋₄)alkoxy, oxo, hydroxy, amino, C₁₋₄alkyl, -O(C₁₋₄alkyl), -NH(C₁₋₄alkyl), -N(C₁₋₄alkyl)(C₁₋₄alkyl), and -S(O)_n(alkyl), wherein said 3- to 7-membered heterocyclic groups contain one or more heteroatom(s) independently selected from N, O, and S, with the point of attachment being either carbon or nitrogen.

19. (twice amended)

A compound or salt according to Claim 17, wherein

Ar is a phenyl group of the formula:



wherein L indicates a bond to the pyrimidine ring in Formula B and the Ar phenyl group is substituted at one, two, or three of positions 2, 4, and 6 with substituents independently selected from:

- i) halogen, cyano, halo(C₁₋₄)alkyl, halo(C₁₋₄)alkoxy, hydroxy, amino, C₁₋₆ alkyl, C₁₋₆alkoxy, (C₁₋₄alkoxy)C₁₋₄alkoxy, and mono- or di(C₁₋₄alkyl)amino,
- ii) C₁₋₆ alkyl and C₁₋₆alkoxy which are further substituted with a 3- to 7-membered carbocyclic and heterocyclic group, which is saturated, unsaturated, or aromatic, which 3- to 7-membered carbocyclic and heterocyclic group may be further substituted with one or more substituents independently selected from halogen, oxo, hydroxy, amino, C₁₋₄alkyl, -O(C₁₋₄alkyl), -NH(C₁₋₄alkyl), and -N(C₁₋₄alkyl)(C₁₋₄alkyl);

R_X and R_Y are the same or different and are independently selected from the group consisting of:

- a) hydrogen (with the proviso that R_X and R_Y are not both hydrogen),
- b) -(C=O)alkyl_A, wherein alkyl_A is a straight or branched alkyl group having from 1 to 8 carbon atoms;
- c) straight, branched, or cyclic alkyl groups consisting of 1 to 8 carbon atoms, (cycloalkyl)alkyl groups consisting of 4 to 12 carbon atoms, straight, branched, or cyclic alkenyl groups consisting of 2 to 8 carbon atoms, or straight or branched alkynyl groups consisting of 2 to 8 carbon atoms, which may be further substituted with one or more substituent(s) independently selected from hydroxy, halogen, amino, cyano, -O(C₁₋₄alkyl), -NH(C₁₋₄alkyl), and -NH(C₁₋₄alkyl)(C₁₋₄alkyl).

20. (twice amended) A compound or salt according to Claim 17, wherein Ar is a phenyl group of the formula: